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the Lineman

RURAL ELECTRIFICATION ADMINISTRATION - U. S. DEPARTMENT OF AGRICULTURE

U. S. DEPARTMENT OF AGRICULTURE



JOB TRAINING AND SAFETY PROGRAMS GAIN IN STATES

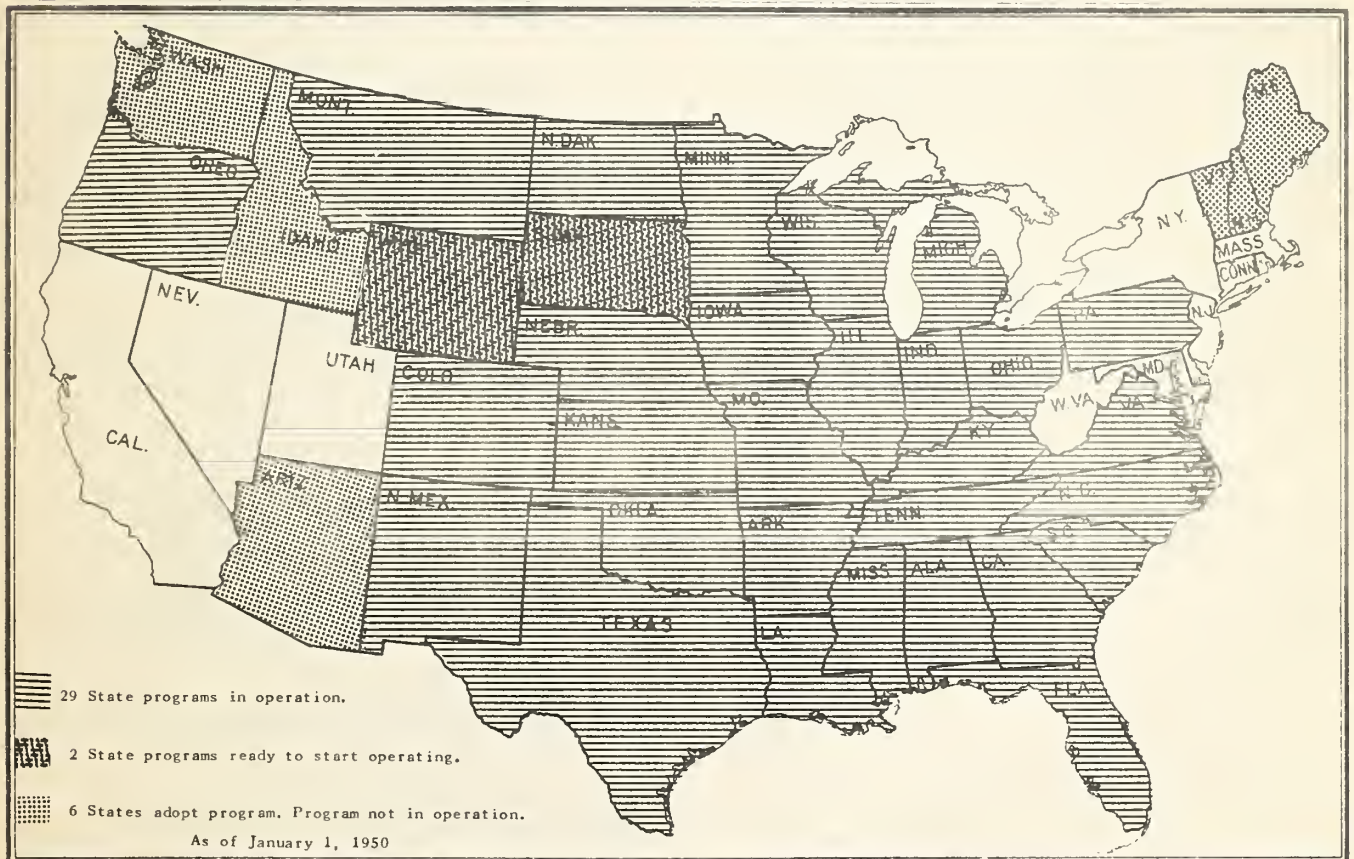
Twenty-nine states were operating job training for safety programs as of January 1, 1950. Each of these states employ one or more full time job training and safety instructors. States that have more than one instructor are:

Texas	6
Wisconsin	3
Illinois	2
North Carolina	2
Georgia	2
Mississippi	2
Tennessee	2
Iowa	2
Missouri	2

Kentucky is seeking another qualified man and will undoubtedly have two full time instructors soon. A total of forty-three instructors are employed by the 29 States.

South Dakota and Wyoming are each seeking a qualified instructor so their programs can be placed in operation.

Six other States have adopted the program but do not have it in operation yet. Of the total miles of energized line, 93.62% is located in the 29 states operating job training for safety programs; 94.69% of consumers connected live in this area.



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Ralph A. C. Hill, Editor

Frank H. LaMaster, Associate Editor

BAD HOUSEKEEPING = BAD PUBLIC RELATIONS

- Editorial -

Good housekeeping is important. Ordinarily we think of good co-op housekeeping as applying to the warehouse, office and building yards. But shouldn't it go beyond this? How about good housekeeping along the lines, around substations and pole yards?

What happens to broken insulators which are changed out? Do we unscrew them and let them drop into the weeds at the foot of the pole? If so, what harm is caused? We know of one instance where a lineman fell from a pole. He struck the ground a few inches from a 33,000 volt insulator which had been changed out and dropped in the weeds. The jagged edges of the broken skirt were pointed up. Suppose the lineman had fallen on this insulator. Could he have been more severely injured than he was from the fall? Would his chances for permanent disability have been increased?

How do the owners of property along the lines feel about assorted, discarded items cluttering their property? What do you do with short pieces of wire, wrapping paper, wooden crates, etc., which are left over from building a new transformer installation? Are such items hauled away or left for someone else to clean up?

Bad housekeeping along the lines not only creates ill will but also may result in injury.

Tree trimming is essential for the efficient operation of electric lines. It is usually necessary to obtain permission from someone before trees can be trimmed or cut. Permission may be difficult to obtain in the future if a messy job is done and the brush is not properly removed. This type of bad housekeeping creates ill will. It may lead to future operating problems.

How about anchors which have been discontinued? Are they dug up and removed, or are the anchor rods merely bent over out of sight in the tall grass or weeds--left to catch in the farmer's plow the next time he plows the field? The writer knows of just such an accident. The anchors originally belonged to a small, local telephone company. When the anchors were abandoned, the rods were bent over and covered with two or three inches of sod. Years later, a new owner started to plow this pasture. The point of the plow hooked in the

eye of an anchor rod. The anchor, of course, held and the tractor was almost turned over backwards. If it had overturned, the farmer could have been killed. As it was, the bad public relations which the incident provoked, almost prevented the building of a power line in the area.

Good housekeeping, whether in the headquarters yards and buildings or out along the lines, pays big dividends in accident prevention and good public relations.

STATE JOB TRAINING and SAFETY NEWS

January, 1950 - The Lineman

Notice has been received of the resignation of Ed Nauert, head instructor of the Texas job training and safety program, and Ivan K. Boggs, an instructor in the Missouri program.

Mr. Nauert becomes electrification advisor for a Texas Co-op., and Mr. Boggs will demonstrate live line tools for the James R. Kearney Corporation of St. Louis.

KENTUCKY

Herman Brawner has recently been employed as Job Training and Safety Instructor for Kentucky.

ARKANSAS

K. J. Bradley, former Job Training and Safety Instructor for Montana, has been employed by Arkansas to fill the vacancy created by the resignation of Kirby Jackson.

MONTANA

E. A. Reid, Montana Job Training and Safety Instructor for Montana, is planning a foreman's conference for January 25, 26, 27.

NEBRASKA

Thomas Gray has been selected to fill the Job Training and Safety Instructor's position formerly held by A. L. Chantry. Mr. Chantry resigned to become manager of a Nebraska cooperative.

NEW MEXICO

Russell Dew, New Mexico Job Training and Safety Instructor, conducted a very successful foreman's conference during the first part of December.

NEBRASKA

A foreman's training conference will be held in Omaha, February 8, 9, 10 at the Paxton Hotel.

LOUISIANA

Joe Chambers, Job Training and Safety Supervisor for Louisiana, is planning a live line maintenance school for early spring.

ELECTRICAL SHOCK, NUMBER 1 CRIPPLER AND KILLER

A single phase line was being converted to three phase. New poles were set to carry the three phase line. The poles carrying the single phase lines were leaned to the south (see

sketch) to get clearance and allow operation of the single phase line during construction.

At one point in the line a single phase tap line extended south. Since the take-off pole leaned to the south which was in the direction of the tap line, an abnormal amount of slack existed in the first span of the tap line. A crew of men were attempting to take up this slack.

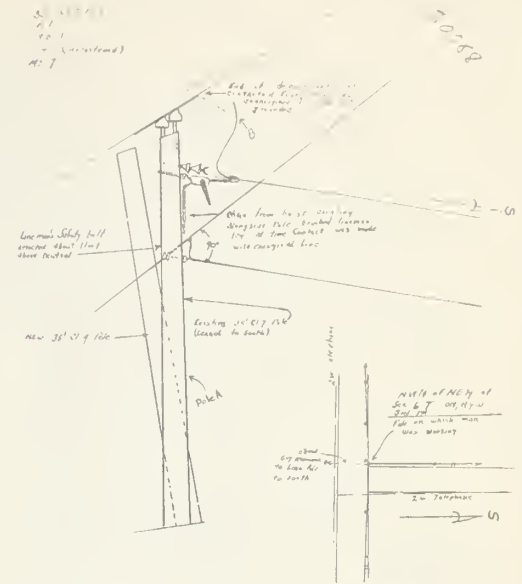
A lineman climbed the take-off pole (a) in the main single phase line and removed the jumper which de-energized the tap line. The single phase main line was not de-energized. He installed a coffering hoist and wire grip and pulled up the slack in the slack take-off span. When the slack was pulled up a considerable length of "loose end" extended beyond the dead-end clamp. (b) Difficulty was experienced in getting the conductor to lay properly in the dead-end clamp. The lineman twisted the conductor slightly in attempting to secure it properly in the clamp. This caused the loose end of the conductor extending beyond the dead-end clamp to contact the energized phase wire of the main line. This momentarily energized the tap line and the coffering hoist which was attached to it.

The lineman had on rubber gloves and did not receive a shock through his hands. However, the chain of the coffering hoist was in contact with his leg. There were second degree burns both above and below the knee. Some of the burns below the knee were third degree burns. The injured man did not lose consciousness.

DISCUSSION POINTS:

1. Rubber gloves did not prevent this accident. In your opinion, did the rubber gloves play any part in saving the lineman's life or in lessening his injury?
2. What effect does the path of the current through the body have on the damage which can result?
3. Which type of contact is likely to cause the most damage hand to hand, hand and foot or knee and foot?
4. Is it extremely dangerous to have loose ends of conductor or any other kind of wire near an energized conductor where it can accidentally be brought in contact with any portion of the energized line?
5. When wire of dangerous length must be brought near energized conductors, why is it coiled in short loops and unrolled as it is used?
6. Is it ever advisable to attach guide ropes to keep loose ends, and otherwise uncontrolled wires, under control?

7. Are hot line cutters and other wire cutting tools ever used to cut off surplus unneeded ends and excess conductor?



A lineman on a pole came into contact with a 120 volt bare secondary. The resulting shock, caused his hooks to cutout and he fell approximately 20 feet down the pole. His contact must have been good as the electrical shock while producing no burns did cause physical shock.

DISCUSSION POINTS:

1. Should bare secondary be covered with rubber protection equipment such as hose and hoods?
2. How about a slotted type special blanket for covering up the neutral or bare secondary conductors? The slot in these blankets is midway of one of the sides. It allows the blanket to be placed straddling a secondary rack or upset bolt so as to hang down as a curtain on either side of the wires. Such a blanket is easily and quickly installed or removed and affords ample protection for working near or climbing past bare secondary.

An apprentice lineman climbed a pole. In passing his safety strap around the pole he came in contact with the phase wire (7200V). The shock caused him to fall from the pole. His left arm was broken in two places. Except for this, he was not seriously hurt.

DISCUSSION POINTS:

1. How could this accident have been prevented: by (a) wearing rubber gloves? (b) killing the line? or (c) belting off below the neutral and doing the job with a hot stick?

2. If you believe rubber gloves to be the answer, check the facts to see if it would be possible to contact the hot phase from this work position with some other part of the body.
3. From a standpoint of both safety and economy, should the method of doing the job with sticks from a remote position be chosen?
4. If the work position required to do the job is too hazardous, and for some reason the job can't be performed with hot sticks, should the line then be killed and grounded each way from, and in sight of, the work area, or should chances be taken and the work done hot?

A lineman climbed a pole to refuse a disconnect. While passing his belt around the pole, his hand contacted a 240 volt bare secondary. The shock caused him to fall from the pole. Attached to his belt was a 4' hot stick. This allowed the bottom end of the stick to extend about 1½ feet below the lineman's boots. When the man hit the ground, the upper end of the hot stick was forced into his chest, causing severe chest injuries.

DISCUSSION POINTS:

1. Did this man's ribs save his life?
2. If the end of the stick had contacted his side or some part not protected by bone, is it possible that the stick could have been forced through his body?
3. Should hot sticks ever be attached to a lineman's belt?
4. Would it have taken any more time to have attached the stick to a hand line and hoisted it up after the lineman had "safetied" off?
5. After being released to the ground, should the upper end of the hand line be anchored to: (a) your belt? (b) the neutral or dead phase? (c) or attached to the pole?
6. If it becomes a habit to hang the hand line on a dead conductor would you be more liable to hang it unthinkingly on a live conductor sometime?
7. Are there good work habits and bad work habits?
8. If we develop safe work habits, will they help protect us in a pinch?

Dere Edditer:

Like I was tellin' you last time, Ben has a lot of hopes for me if I ever settle down. He said the first thing I ought to do was to quit talkin' when I ought to be listenin'. We was discussin' housekeeping along the lines and how brush left along the right-of-way didn't look good and could make farmers mad and sometimes kill their stock if it was wild cherry brush. I was tellin' 'em I didn't see why a cow would eat wilted leaves over a fence when there was plenty of green grass inside the pasture. Ben said I wouldn't understand that because I wasn't a cow but when you come right down to it human sikology wasn't so different—we often pine for something on the other side of the fence when there is stuff just as good or even better right at our feet.

I was frettin' because Ben still had me mostly on the ground when I could get up a pole, especially if it wasn't too high or too many of them one after another. Ben was telling me about a groundman he hired one time. He was too old to ever learn to climb so all he could ever hope to do was be a groundman. He didn't spend his time wishing he could be something he couldn't. He just made up his mind to be the best darn groundman in the outfit and he was. It wasn't long till everyone wanted old Hank when they went out on a job. Hank made the best of the pickins on his side of the fence.

Then Ben looks at me right straight and says, "Son, if you'll look real hard there's plenty of good stuff on your side of the fence and the sooner you clean it up good the quicker the gate will open and let you on the other side - an I'm the gate, Bud." Yours truly,

Hi Tension



(over)

Cartoon suggested by "Lefty" Anderson, Ozark Border Electric Corporation, Poplar Bluff, Missouri.